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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,206	02/03/2006	Norbert Jeanne Louis Philips	NL030942	9587

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EXAMINER

BERHANE, YOSIEF H

ART UNIT	PAPER NUMBER
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4144

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,206	Applicant(s) PHILIPS ET AL.	
	Examiner YOSIEF BERHANE	Art Unit 4144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02/17/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/03/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

Application/Control Number: 10/567,206

Art Unit: 4144

DETAILED ACTION

1. Claims 1-10 have been examined and are pending.

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449 submitted 2/03/2006, is attached to the instant Office action.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 10 discloses a computer program product, however, it is not said where the computer program product is stored. Claim 10 pertains to software which is non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 9-10 are rejected under 35 U.S.C. 102(e) patented on 03/30/2004 as being anticipated by US patent 6715007 to Williams et al. (hereinafter “Williams”).

As per claim 1, Williams teaches a Buffer management system (100) for controlling in a data communication system a delay (A) of a data unit (150) between input in the buffer management system (100) and output from the buffer management system (100), comprising (Abstract, see also Fig. 2 and associate text, claim 14 discloses the system):

a buffer (102), in which blocks (104, 106) of inputted data units (150, 152) are written with a block write rate (R_w), and from which data units (154, 156) are read with a read rate (R_r) (Under Detailed description, col. 3, lines 23-26, “Data 26 is therefore written into buffer 32 at the source data rate and read from buffer 32 at the sink data rate”).

a buffer filling measurement component (110) arranged to determine an amount (F) of data units in the buffer (102) at a specified time instant (TI), and yielding a filling measurement (mF) (Under Detailed description, col. 5, lines 49-55, “Between writing task 108 and reading task 110, process 100 executes sub process 116 (FIGS. 3 and 4) to control buffer fill rate 54. In a task 118 (FIG. 4), controller 38 continuously monitors a buffer data level 62, i.e., the amount of data 26 in buffer 32 from moment to moment, and buffer fill rate 54, i.e., the rate at which data 26 is filling buffer 32.”, also see Fig. 4 for disclosed process.);

a data rate conversion component (108), arranged to set a ratio of the read rate (R_r) and the write rate (R_w), on the basis of the filling measurement (mF); characterized in that (col. 5, lines 63-67 and col. 6, lines 1-2, discusses several ways in which controller 38 may monitor buffer fill rate 54. For example, controller 38 may monitor buffer data level 62 by sampling, in which decreasing buffer data levels 62 indicate a negative buffer fill rate 54. Likewise, **controller 38 may monitor the source data rate and the sink data rate**),

An input time measuring component (112) is comprised, arranged to measure an input time instant (T_a) of input of the data unit (150) in the buffer management system (100), and yielding an input time measurement and (col. 4, lines 26 – 30, “In data-flow regulation process 100 (FIG. 3), a task 102 establishes an initial value for the source data rate in data source 24. Similarly, a task 104 establishes an initial value for the sink data rate.”);

A delay control component (120) is comprised for controlling the delay by controlling the data rate conversion component (108) on the basis of the filling measurement (mF) and the input time measurement (mT_a) (col. 6, lines 2-7, where buffer fill rate 54 is taken to be equal to the difference of the source data rate less the sink data rate, i.e., $R_{sub.Fill} = R_{sub.Source} - R_{sub.Sink}$. In the preferred embodiment, buffer fill rate 54 is changed as a consequence of changing the source data rate or the sink data rate)

As per claim 2, Williams teaches a Buffer management system (100) as claimed in claim 1, comprising a read time measuring component (160), arranged to measure a read time instant (T_r) of a first data unit (154), and yielding a read time measurement (mT_r), and in which buffer management system (100) the delay control component (120) is arranged to (col. 4, lines 26-30 “In data-flow regulation process 100 (FIG. 3), a task 102 establishes an initial value for the source data rate in data source 24. Similarly, a task 104 establishes an initial value for the sink data rate.”);

Control the data rate conversion component (108) on the basis of the read time measurement (mT_r) (col. 5, lines 63-67 and col. 6, lines 1-2, “Those skilled in the art will appreciate that there are several ways in which controller 38 may monitor buffer fill rate 54. For example, controller 38 may monitor buffer data level 62 by sampling, in which decreasing buffer

Application/Control Number: 10/567,206

Art Unit: 4144

data levels 62 indicate a negative buffer fill rate 54. Likewise, controller 38 may monitor the source data rate and the sink data rate”).

As per claim 3, Williams teaches a Buffer management system (100) as claimed in claim 1 or 2, in which the data rate conversion component (108) comprises a voltage controlled oscillator (col. 5 lines 65-67 and col. 6, lines 1-2, where in, the buffer filling is controlled on the basis of the read rate, is disclosed).

As per claim 4, Williams teaches a Buffer management system (100) as claimed in claim 1 or 2, in which the data rate conversion component (108) comprises a sample rate converter (514), arranged to produce a second number of samples (142) out of a first number of samples (140) (col. 5 lines 65-67 and col. 6, lines 1-2, where in, the buffer filling is controlled by the use of sampling, is disclosed).

As per claim 9, Williams teaches a method of controlling in a data communication system a delay (A) of a data unit (I 50), between input in a digital audio receiver (500) and output from the digital audio receiver (500), comprising (col. 10, lines 41-50, details are disclosed in claims 1-13 “the present invention teaches a method of regulating a flow of data in a communication system and an apparatus therefor. The method is simple and straightforward process of implementing such a data-rate regulation in software. This process is suitable for use with conventional software-determined radios and other programmable devices.”)

writing blocks (104, 106) of inputted data units (150, 152) in a buffer (102) with a block write rate (R_w); (Under Detailed description, col. 3, lines 23-26, “Data 26 is therefore written into buffer 32 at the source data rate and read from buffer 32 at the sink data rate.”):

determining a filling measurement (mF) of an amount (F) of data units in the buffer (102) at a specified time instant (TI); (col. 5, lines 49-55 “Between writing task 108 and reading task 110, process 100 executes sub process 116 (FIGS. 3 and 4) to control buffer fill rate 54. In a task 118 (FIG. 4), controller 38 continuously monitors a buffer data level 62, i.e., the amount of data 26 in buffer 32 from moment to moment, and buffer fill rate 54, i.e., the rate at which data 26 is filling buffer 32.”, also see Fig. 4 for disclosed process.);

setting a ratio of a read rate (Ra') and the write rate (Rw), on the basis of the filling measurement (mF) (col. 6, lines 1-10, “controller 38 may monitor the source data rate and the sink data rate, where, buffer fill rate 54 is taken to be equal to the difference of the source data rate less the sink data rate, i.e., $R_{sub.Fill} = R_{sub.Source} - R_{sub.Sink}$. In the preferred embodiment, buffer fill rate 54 is changed as a consequence of changing the source data rate or the sink data rate. The change in buffer fill rate may not be instantaneous. Also, other calculations to obtain buffer fill rate 54 may be used)

and reading data units (154, 156) from the buffer (102) with the read rate (Rr), the method being characterized in that (Under Detailed description, col. 3, lines 23-26, “Data 26 is therefore written into buffer 32 at the source data rate and read from buffer 32 at the sink data rate.”):

an input time measurement (mTa) of an input time instant (Ta) of input of the data unit (150) in the digital audio receiver (500) is performed (col. 4, lines 26 – 30, “In data-flow regulation process 100 (FIG. 3), a task 102 establishes an initial value for the source data rate in data source 24.”):

Application/Control Number: 10/567,206

Art Unit: 4144

and the delay (A) is controlled by setting the ratio of the read rate (Rr) and the write rate (Rw) also on the basis of the input time measurement (mTa) (col. 6, lines 1-10, “controller 38 may monitor the source data rate and the sink data rate. Throughout this discussion, buffer fill rate 54 is taken to be equal to the difference of the source data rate less the sink data rate, i.e., $R_{sub.Fill} = R_{sub.Source} - R_{sub.Sink}$. In the preferred embodiment, buffer fill rate 54 is changed as a consequence of changing the source data rate or the sink data rate. The change in buffer fill rate may not be instantaneous. Also, other calculations to obtain buffer fill rate 54 may be used”).

As per claim 10, Williams discloses a computer program product enabling a processor to execute the method of claim 9. (col. 10, lines 41-50, “the present invention teaches a method of regulating a flow of data in a communication system and an apparatus therefor. The method is simple and straightforward process of implementing such a data-rate regulation in software.”)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams as applied to claim 1 above and further in view of the examiner.

As per claim 5, Williams does not disclose a decompressor (512), in which buffer management system, the delay control component (120), is arranged to control the data rate conversion component (108) on the basis of a decompression delay associated with the decoder and/or an amount (W) of data units that are in a second buffer (506).

However, Williams does teach a means for controlling the buffer data rate on the basis of the compression delay associated with writing a stream of data into buffer (col. 6 lines 14-21, “A query task 120 determines if data initialization is taking place, i.e., if task 108 is writing the beginning of a stream of data 26 into buffer 32” and col. 26, lines 1-4. “Those skilled in the art will appreciate that there are several ways to perform the data initialization and set an initial threshold. For example, the initial threshold reached query task 122 may check for a set time delay rather than a buffer level.”

Therefore, it would have been obvious to one of ordinary skill in the art to disclose a buffer management system that controls the data rate based on a decompression delay associated with the decoder during the reading process rather than a compression delay associated with the encoder during the writing process as a matter of design choice.

As per claims 6-8 the examiner notes **a quotation from the MPEP under section 2114, which forms the basis for determining patentability of claims dealing with intended use:**

“Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, “[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” In re Young, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams as applied to claim 1 above and further in view of the examiner.

As per claim 6, the preamble “Digital audio receiver (500) comprising;” is an intended use and is not further limited by the body of the claim, “a radio reception component (502) with an output (503) connected to a buffer management system (100) as in claim 1”.

Whereby the buffer management system for regulating data rate in a communication system is already anticipated by Williams, and can be intended for use in any communication device i.e. “Digital audio receiver”. Furthermore, Williams discloses a communication system which is capable of receiving digital audio (col. 10, lines 41-45 “This process is suitable for use with conventional software-determined radios and other programmable devices.”)

As per claim 7, the preamble, “Headphones (530) comprising,” is an intended use and not further limited by the body of the claim “a digital audio receiver (500) as claimed in claim 6, an output of the digital audio receiver (500) being connected to a loudspeaker of the headphones”.

Application/Control Number: 10/567,206

Art Unit: 4144

Whereby the buffer management system claimed in claim 6 (anticipated by Williams) would have been obvious to use/apply towards “Headphones” (a communication device as anticipated by Williams) to any one with ordinary skill in the pertinent art.

As per claim 8, the preamble, “Stand-alone surround sound loudspeaker cabinet (540) comprising” is an intended use and not is not further limited by body of the claim, “a digital audio receiver (500) as claimed in claim 6, an output of the digital audio receiver (500) being connected to a loudspeaker (528) in the cabinet.”

Whereby the buffer management system claimed in claim 6 (anticipated by Williams) would have been obvious to use/apply towards a “Stand-alone surround sound loudspeaker” (a communication device as anticipated by Williams) to any one with ordinary skill in the pertinent art.

Conclusion

6. Prior arts made of record, not relied upon:

US 6766376 B2 to Harold Edward Price discloses a buffering system for streaming media.

US 5027351A to Martin L. F. De Prycker et al. disclose an asynchronous time division communication system for regulating buffer filling.

US 6965804 B1 to Laura Mercs et al. disclose a buffer management system for digital audio

US 7111091 B2 to Ari Lakaniemi et al. disclose a device and method for controlling a stream of data packets.

US 6778499 B1 to Nimal G. Senarath et al. disclose a method and apparatus for handling bursty data in a communication system.

Application/Control Number: 10/567,206

Art Unit: 4144

US 6598132 B2 to Toan D. Tran disclose a buffer manager for network switch port.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yosief Berhane whose telephone number is (571) 274-7164. The examiner can normally be reached at 7:30-5:00 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi T. Arani can be reached at (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Y. B./

Examiner, Art Unit 2600

/Taghi T. Arani/

Supervisory Patent Examiner, Art Unit 4144

8/11/2008